

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
7 April 2005 (07.04.2005)

PCT

(10) International Publication Number  
**WO 2005/031902 A2**

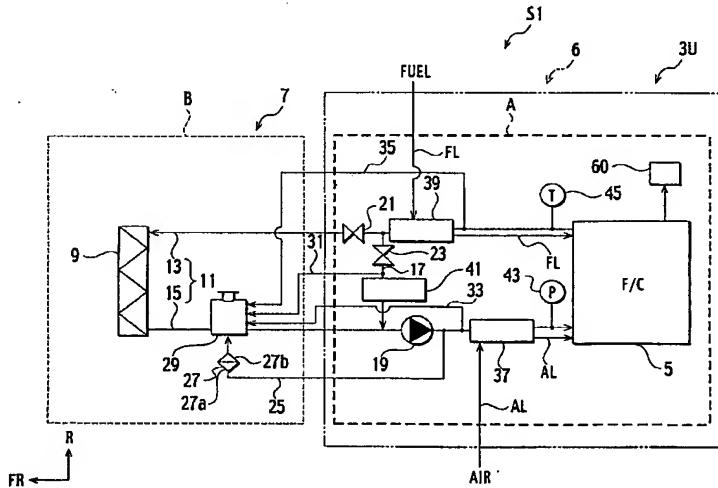
- (51) International Patent Classification<sup>7</sup>: **H01M 8/00**
- (21) International Application Number:  
**PCT/JP2004/011805**
- (22) International Filing Date: 11 August 2004 (11.08.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
2003-336329 26 September 2003 (26.09.2003) JP
- (71) Applicant (*for all designated States except US*): NISSAN MOTOR CO., LTD. [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 2210023 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): YAMADA, Takahiro [JP/JP]. UOZUMI, Tetsuo [JP/JP].
- (74) Agents: MIYOSHI, Hidekazu et al.; Toranomon Kotohira Tower, 2-8, Toranomon 1-chome, Minato-ku, Tokyo 105-0001 (JP).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KB, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FUEL CELL TEMPERATURE CONTROL APPARATUS



**WO 2005/031902 A2**

(57) Abstract: A fuel cell temperature control apparatus controlling a temperature of a fuel cell (5) disposed in an underfloor portion (3U) of a vehicle (1) is provided with a coolant circuit (11) permitting coolant, by which a fuel cell is cooled, to flow through a heat exchanger (9, 47) disposed in a motor room (7) located at a front portion of a vehicle, a bypass circuit (17) connected to the coolant circuit and permitting the coolant to bypass the heat exchanger, and a coolant pump (19) disposed in the coolant circuit between the fuel cell and the bypass circuit so as to circulate the coolant. The bypass circuit and the coolant pump are mounted in an underfloor portion of the vehicle at a position rearward of the motor room.